

## **HYBRID TURBO-MUD FOR MULTIPLE ACCESS SYSTEMS**

### **ABSTRACT OF THE DISCLOSURE**

[0097] The present invention is a high quality real-time Turbo-Mud processing system initially employing a high complexity multi-user detector that results in better estimates of the bit streams, and then the remaining iterations employing a computationally low linear-based-MUD/Turbo-MUD. The present approach uses more computational computations at the first iteration, and less computations on subsequent processing due to cycling through the Turbo-Mud process with a low complexity sub-optimal detector that significantly cleans up the estimates in a few iterations of the Turbo-MUD. The present invention also provides an efficient means of estimating symbols transmitted in a multi-user environment in overloaded or super-saturated conditions.